

Claims

What is claimed is:

1. An apparatus for receiving and aligning a multiple electrode pair array and a multiple well plate used in electroporation, comprising:

a housing which includes a bottom housing portion and a pair of side housing portions which project upward from said bottom housing portion,

a pair of board-reception structures adjacent to said inner portions of said side housing portions, and

multiple well plate engaging and disengaging means, supported by said housing, for engaging a multiple well plate with a multiple electrode pair array and for disengaging a multiple well plate from a multiple electrode pair array.

2. The apparatus of claim 1 wherein said multiple well plate engaging and disengaging means include a multiple well plate lifting and lowering assembly.

3. The apparatus of claim 2 wherein said multiple well plate lifting and lowering assembly includes:

a lifting/lowering handle located outside said housing,

an offset axle connected to said lifting/lowering handle, wherein said offset axle includes a driving cam portion,

tray lift rods in contact with said driving cam portion of said offset axle, wherein said tray lift rods are connected to said bottom housing portion by lift-rod-retainer portions,

a plate lifting/lowering tray in contact with said tray lift rods, wherein a bottom portion of said plate lifting/lowering tray includes a plurality of transverse force-balancing ribs, and

tray lowering cams, connected to a bottom portion of said plate lifting/lowering tray, for engaging said offset axle for lowering said plate lifting/lowering tray.

4. The apparatus of claim 3, further including:

a pair of well-plate alignment grooves connected to said plate lifting/lowering tray adjacent to said board-reception structures.

5. The apparatus of claim 3, further including:

hold-down clips supported by said housing and actuated by movement of said plate lifting/lowering tray.

6. The apparatus of claim 5, further including:

hold-down-clip actuator arms, operated by said plate lifting/lowering tray, for actuating said hold-down clips.

7. The apparatus of claim 1, further including:

an inside alignment surface that is contacted by a complementary outside alignment surface on an outside corner of the multiple well plate.

8. The apparatus of claim 1, further including:

a lid connected to said housing.

9. The apparatus of claim 8, further including:

a pair of hinges for connecting said lid to said housing.

10. The apparatus of claim 1, further including:

a socket assembly supported by said housing, wherein said socket assembly includes electrical conductors for contacting corresponding row electrical connection members and column electrical connection members on the multiple electrode pair array.